

Abstract of the Disclosure

AS A method for manufacturing a semiconductor device including a conductive path extending from the upper surface of an insulating layer on a semiconductor substrate to a conductive member embedded in the insulating layer. An etching mask, which defines an etched hole for the conductor path, is formed on the insulating layer within a specified permissible error, and that portion of the insulating layer which is not covered by the etching mask is removed by a reactive ion etching unit having a reaction chamber into which a reactive gas of CHF_3/CO is introduced at a CHF_3/CO flow ratio of about 15/85. After this, the etched hole formed by an etching process is filled with a conductive material for the conductive path.